ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

May ##, 2019

Mrs. Michele Holbrook
Plant Manager
Corning Incorporated
310 North College Road
Wilmington, NC 28405

SUBJECT: Air Quality Permit No. 03809T54
Facility ID: 6500049
Corning Incorporated
Wilmington, North Carolina
New Hanover County
Fee Class: Title V
PSD Status: Minor

Dear Mrs. Holbrook:

In accordance with your completed Air Quality Permit Application for Renewal to your Title V permit received on December 29, 2017, we are forwarding herewith Air Quality Permit No. 03809T54 to Corning Incorporated, 310 North College Road, New Hanover County, North Carolina authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

New Hanover County has triggered increment tracking under PSD for particulate matter 10 ($PM_{10}$), nitrogen oxide ($NO_x$), and sulfur dioxide ($SO_2$). This renewal will result in an increase in 0.1 pounds per hour of $PM_{10}$, 6.7 pounds per hour of $NO_x$, and 0.5 pounds per hour of $SO_2$.

This Air Quality Permit shall be effective from May ##, 2019 until April 30, 2024, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Richard R. Simpson, at (919) 707-8476 or Richard.Simpson@ncdenr.gov.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

c: Heather Ceron, EPA Region 4
Brad Newland, Wilmington Regional Office
Central Files
Connie Horne (cover letter only)

**ATTACHMENT to cover letter to Air Quality Permit Number 03809T54**
**Insignificant Activities under 15A NCAC 02Q .0503(8)**

| Emission Source ID No. | Emission Source Description |
|---|---|
| IES-D | Diesel storage tanks with a maximum capacity of 65,000 gallons |
| IES-CT | Cooling tower |
| IES-DRAW | Draw Conditioning |
| IES-EBSV | Emergency bulk SiC14 system (ID No. ES-EBSV) with associated spray scrubber (50 gpm liquid injection rate, ID No. CD-HCl-090) |
| IES-EHVS | Emergency halide storage area ventilation system |
| IES-EPG-6* | One diesel-fired IC driven emergency generator (755 hp) |
| IES-EPG-7* | One diesel-fired IC driven emergency generator (708 hp) |
| IES-FB | Maintenance spray booth |
| IES-GC | Glass cleaning operation |
| IES-HOUSEVACS | House vacuum systems with fabric filters |
| IES-PC | Purge carts |
| IES-SHP1 | One soot handling silo (1,200 cubic foot capacity, north silo) |
| IES-SHP2 | One soot handling silo (1,200 cubic foot capacity, south silo) |
| IES-SOOTVACS | Soot vacuum systems with fabric filters |
| IES-Solvent | Fugitive solvent emissions |
| IES-nMPDIECLEAN | Three nonhalogenated solvent vapor cleaning machine |
| IES-CF | Furnace Gas Treatment |

* These emergency engines were determined to be a portable non-road units and were found to be exempt from NSPS Subpart IIII and NESHAPs Subpart ZZZZ

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the Permittee is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” or 02Q .0711 “Emission Rates Requiring a Permit.”
3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled “Specific Permit Conditions Regulatory Guide.” The link to this site is as follows: http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide.

## ATTACHMENT to cover letter to Air Quality Permit Number 03809T54

The following table lists all changes made from previous permit 03809T53:

| Page(s) | Section | Description of Change(s) |
|---|---|---|
| Cover and throughout | Throughout | Updated all tables, dates, and permit revision numbers. |
| Attachment | Insignificant Activities | Based on historical emission data, consolidated all "Diesel storage tanks with a maximum capacity of 65,000 gallons" as one system and the identification changed to IES-DS. |
| Attachment | Insignificant Activities | Based on historical emission data, consolidated all "House vacuum systems with fabric filters" as one system and the identification changed to IES-HOUSEVACS. |
| Attachment | Insignificant Activities | Based on historical emission data, consolidated all "Soot vacuum systems with fabric filters" as one system and the identification changed to IES-SOOTVACS. |
| Throughout | Throughout | Corrected the regulatory reference from 2D and 2Q to 02D and 02Q. |
| Throughout | Throughout | Corrected wording change from assure to ensure. |
| 1 | Section 1 | For ES-002 control device description, updated by removing "each". |
| 1 | Section 1 | Removed references to the previous permit modification since they are not applicable for this permit renewal. |
| | Section 1 | Updated footnote language for CD-BH-7A. |
| | Section 2.1 A.1., Section 2.1 B.1. | Updated language with the DAQ shell Title V permit conditions for 15A 02D .0515: Particulates from Fuel Miscellaneous Industrial Processes. |
| | Section 2.1 A.2., Section 2.1 C.1. Section 2.1 F.2. | Updated language with the DAQ shell Title V permit conditions for 15A 02D .0516: Sulfur Dioxide Emissions from Combustion Sources. |
| | Section 2.1 A.3., Section 2.1 B.2., Section 2.1 C.2., Section 2.1 F.3. | Updated language with the DAQ shell Title V permit conditions for 15A 02D .0521: Control of Visible Emissions. |
| 5, 13 | Section 1 and Section 2.1 C. | Per renewal, added new source with description of "One CI diesel-fired emergency fire pump (160 hp)" and ID No. ES-FP3. The source is subject to NSPS IIII and MACT ZZZZ. |
| 14 | Section 2.1 C.3. and 4. | Updated MACT ZZZZ language for generators and emergency fire pumps. |
| 6, 21 | Section 1 and Section 2.1 F. | Per renewal, deleted boilers ES-T5HB-2 and EST5HB-3 since they will no longer be operational. |
| 6, 22 | Section 1 and Section 2.1 F5. | Since ES-HB is applicable to MACT DDDDD, included the applicable regulations. |
| 26 | Section 2.2 B.1.b.iv. | Deleted "or tested emission factors (July 2016)". |
| 26 | Section 2.2 B.1.d. | Deleted old testing requirements from the previous modification since the test has already been performed. |
| 28 | Section 2.2 D.1. | Per renewal, updated modeling was performed and approved by DAQ's meteorologist Matthew Porter and Tom Anderson on February 26, 2019. Deleted emission source contributions since the emission limits are from the stack. |
| 28 | Section 2.2 D.1.b.i.(A) | Per renewal, updated the section language to include "where applicable". |
| 28 | Section 2.2 E. | Updated the soot vacuum system ID No. to SOOTVACS. |
| 32 | Section 2.3 A.1. | Per renewal, updated CAM minimum pressure for ES-002 from 0.2 to 0.1 in inches of water. |

| Page(s) | Section | Description of Change(s) |
|---|---|---|
| 32 | Section 2.3 A.1.b. | Per renewal, added the word “hour” in the Data Collection Procedure. |
| 32 | Section 2.3 A.1.c. | Deleted old testing effective dates. |
| 28-37 | General Conditions | The General Conditions were updated to the latest version of DAQ shell version 5.3 08/12/2018. |

State of North Carolina
Department of Environmental Quality
Division of Air Quality

# AIR QUALITY PERMIT

| Permit No. | Replaces Permit No.(s) | Effective Date | Expiration Date |
|---|---|---|---|
| 03809T54 | 03809T53 | May ##, 2019* | April 30, 2024 |

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

## Permittee: Corning Incorporated

**Facility ID:** **6500049**
**Facility Site Location:** **310 North College Road**
**City, County, State, Zip:** **Wilmington, New Hanover County, NC, 28405**

**Mailing Address:** **310 North College Road**
**City, State, Zip:** **Wilmington, NC, 28405**

**Application Number:** **6500049.17C**
**Complete Application Date:** **December 29, 2017**

**Primary SIC Code:** **3229**
**Division of Air Quality, Regional Office Address:** **Wilmington Regional Office**
**127 Cardinal Drive Extension**
**Wilmington, NC 28405-3845**

Permit issued this the ##th day of May, 2019

William D. Willets, P.E., Chief, Air Permitting Section
By Authority of the Environmental Management Commission

Table of Contents

# SECTION 1 - PERMITTED EMISSION SOURCES AND ASSOCIATED AIR POLLUTION CONTROL DEVICES AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

| Page Nos. | Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|---|---|---|---|---|
| 7-9, 19-22, 24-27 | ES-002 **CAM** | Natural gas-fired chemical vapor deposition process (8.22 million Btu per hour heat input) | CD-BH-1,<br><br>CD-BH-2, and<br><br>CD-BH-3 | Fabric filter system consisting of 3 modules (12,012 square feet of filter area),<br>Fabric filter system consisting of 4 modules (20,888 square feet of filter area), and<br>Fabric filter system consisting of 8 modules (53,016 square feet of filter area) |
| | | | with a minimum of 48,964 square feet of filter area on-line venting to a minimum of two sieve tray scrubbers operating in parallel in the following configuration: | |
| | | | CD-HCL-5, CD-HCL-6, or CD-HCL-7 Vent to Stack 3 | Three sieve tray scrubbers (80 gallons per minute water/weak acid injection, each) |
| 16, 21-22, 24 | ES-001 | Glass modification, Glass drying and Tramp fume collection system | CD-TF-1 and CD-TF-2<br><br>vent to Stack 2A<br><br>CD-TF-3, and CD-TF-4<br><br>vent to Stack 2A | Two four stage horizontal spray chamber scrubbers (360 gallons per minute minimum water injection, each)<br><br>Two educing venturi scrubbers (306 gallons per minute minimum caustic solution injection, minimum 4 pH, each)<br><br>(CD-TF-1 through CD-TF-4 interconnected and in parallel, 3 out of 4 scrubbers on line at any time) |
| 16, 21-22, 24-25 | ES-005 | Glass drying and Tramp fume collection system | CD-TF-6 or CD-TF-7, vent to Stack 3<br><br>and<br><br>CD-TF-8 or CD-TF-9 vent to Stack 3 | Two educing venturi scrubbers (350 gallons per minute caustic solution injection, minimum 4 pH, each)<br><br>Two packed tower countercurrent scrubbers (257 gallons per minute minimum caustic solution injection, 15 foot LANPAC bed height, each) |

| Page Nos. | Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|---|---|---|---|---|
| 10-11, 21-22, 24-25 | ES-003 | Miscellaneous emissions collection system consisting of: analytical lab hood, acid tank farm vents, and PA chemical transfer station | CD-TF-1 and CD-TF-2 vent to Stack 2A<br><br>CD-TF-3, and CD-TF-4 vent to Stack 2A | Two four stage horizontal spray chamber scrubbers (360 gallons per minute minimum water injection, each) with:<br><br>Two educing venturi scrubbers (306 gallons per minute minimum caustic solution injection, minimum 4 pH, each)<br><br>(CD-TF-1 through CD-TF-4 interconnected and in parallel, 3 out of 4 scrubbers on line at any time) |
| 7-9, 19-21, 24-26 | ES-006<br>**CAM** | Natural gas-fired chemical vapor deposition process (8.22 million Btu per hour heat input)<br><br>**Alternative Operating Scenario (AOS)**<br>Natural gas-fired chemical vapor deposition process (1.15 million Btu per hour heat input) | CD-BH-4<br>Vent to Stack 3 | Fabric filter system consisting of 12 modules (3,500 square feet of filter area each), each module shall maintain a maximum air to cloth ratio of 1:1 when operating.<br><br>**AOS**<br>Fabric filter system consisting of 2 modules (3,500 square feet of filter area each), each module shall maintain a maximum air to cloth ratio of 1.62:1 when operating. |
| 7-9, 19-20, 24-26 | ES-007<br>**CAM** | Natural gas-fired chemical vapor deposition process (11.58 million Btu per hour heat input) | CD-BH-5<br>vent to Stack 4 | Cartridge filter (maximum air-to-cloth ratio of 2.06:1 when operating, nine of eleven modules on line) |
| 12-13 | ES-EPG1<br>**MACT ZZZZ** | One CI diesel-fired emergency generator (800 hp, 450 kW) | NA | NA |
| 12-13 | ES-EPG2<br>**MACT ZZZZ** | One CI diesel-fired emergency generator (800 hp, 450 kW) | NA | NA |
| 12-13 | ES-EPG3<br>**MACT ZZZZ** | One CI diesel-fired emergency generator (2,925 hp, 2,000 kW) | NA | NA |
| 12-13 | ES-EPG4 (not constructed)* | One CI diesel-fired emergency generator (2,190 kW) | NA | NA |
| 12-13 | ES-FP1<br>**MACT ZZZZ** | One CI diesel-fired emergency fire pump (160 hp) | NA | NA |
| 12-13 | ES-FP2<br>**MACT ZZZZ** | One CI diesel-fired emergency fire pump (187 hp) | NA | NA |

| Page Nos. | Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|---|---|---|---|---|
| 12-13 | ES-FP3<br>**NSPS IIII**<br>**MACT ZZZZ** | One CI diesel-fired emergency fire pump (160 hp) | NA | NA |
| 16, 20 | ES-COATING | Acrylate coating and curing operations for glass optical fiber | NA | NA |
| 7-9, 19-22, 24-26 | ES-008<br>**CAM** | Natural gas-fired chemical vapor deposition process (3.5 million Btu per hour heat input) | CD-BH-6<br><br>and<br><br>CD-HCL-8<br><br>to<br><br>CD-POS-8<br><br>**OR**<br>CD-HCL-9<br><br>to<br><br>CD-POS-9<br><br>Vent to Stack 5 | Fabric filter (33,175 square feet of filter area with 19,905 square feet of filter area on line)<br><br>Venting to:<br><br>Sieve tray scrubber (80 gallons per minute water/weak acid injection)<br><br>Venting to<br><br>Sieve tray scrubber (30 gallons per minute caustic solution injection)<br><br>**OR**<br>Sieve tray scrubber (80 gallons per minute water/weak acid injection)<br><br>Venting to<br><br>Sieve tray scrubber (30 gallons per minute caustic solution injection) |
| 16, 21-22, 24 | ES-009 | Glass drying process | CD-TF-10<br><br>**OR**<br>CD-TF-11<br><br>Vent to Stack 5 | Packed tower scrubber (257 gallons per minute caustic solution injection, 15 foot LANPAC bed height)<br><br>**OR**<br>Packed tower scrubber (257 gallons per minute caustic solution injection, 15 foot LANPAC bed height) |
| 10-11, 20-21, 24-25 | ES-010 | Various wave guide manufacturing equipment including delivery cabinet, storage tank and fill reservoir | CD-TF-12<br><br>**OR**<br>CD-TF-13<br><br>Vents to Stack 5 | Educing venturi scrubber (350 gallons per minute caustic solution injection)<br><br>**OR**<br>Educing venturi scrubber (350 gallons per minute caustic solution injection) |

| Page Nos. | Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|---|---|---|---|---|
| 7-9, 19-25 | ES-011 | Glass modification equipment (including fabric filter (354 square feet of filter area with a minimum of 177 square feet of filter on line CD-BH-7A*) | CD-OX1, CD-OX2, CD-OX3, CD-OX4, CD-OX5, and CD-OX6 to<br><br>CD-HFS-1<br><br>to<br><br>CD-BH-7<br><br>Vents to Stack 6 | Six Natural gas-fired thermal oxidizers (1.2 million Btu per hour total heat input); minimum of three on line<br><br>venting to:<br><br>Vertical moving bed limestone adsorber<br><br>venting to:<br><br>Fabric filter (4,666 square feet of filter area with a minimum of 2,333 square feet of filter area on line) |
| 7-9, 19-20, 24-26 | ES-004 **CAM** | Natural gas-fired chemical vapor deposition process (5.26 million Btu per hour heat input) | CD-BH-9<br><br>Vents to Stack 7 | Cartridge filter (maximum air-to-cloth ratio of 2.0:1 when operating two of four modules on line) |
| 17-18, 24 | ES-HB **[112(j) Case-by-Case MACT], MACT DDDDD** | Natural gas-fired humidification boilers (2.9 million Btu per hour) | NA | NA |

**** Control device (CD-BH-7A) is not required for compliance with any standard and is used as equipment protection for thermal oxidizers CD-OX-1 through CD-OX-6.**

# SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

## 2.1 - Emission Source(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

### A. Glass Modification Process (ID No. ES-011) with six oxidizers, fabric filter, and scrubber controls,
### Two Chemical Vapor Deposition Processes (ID Nos. ES-002 and ES-008) with fabric filter and scrubber controls,
### Three Chemical Vapor Deposition Processes (ID Nos. ES-004, ES-006, ES-007) with fabric filter controls.

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Particulate matter | For process rates up to 30 tons per hour:<br>$E = 4.10 \times P^{0.67}$<br>For process rates greater than 30 tons per hour:<br>$E = 55.0 \times P^{0.11} - 40$<br>Where:<br>E = allowable emission rate in pounds per hour, and<br>P = process weight in tons per hour | 15A NCAC 02D .0515 |
| Sulfur dioxide | 2.3 pounds per million Btu heat input | 15A NCAC 02D .0516 |
| Visible emissions | 20 percent opacity | 15A NCAC 02D .0521 |
| Odorous emissions | **State-enforceable only**<br>See Section 2.2 A. 2. | 15A NCAC 02D .1806 |
| NOx | **PSD Avoidance** - facility wide emissions shall not exceed 250 tons per consecutive 12-month period, running monthly total<br>(See Multiple Emissions Sources - Section 2.2 B. 1.) | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |
| PM10 | **PSD Avoidance** - facility wide emissions shall not exceed 250 tons per consecutive 12-month period, running monthly total<br>(See Multiple Emissions Sources - Section 2.2 E. 1.) | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |
| Toxic air pollutants | **State-enforceable only**- toxic air pollutant ambient impact must not exceed acceptable ambient concentrations<br>(See Multiple Emissions Sources - Section 2.2 D. 1.) | 15A NCAC 02D .1100 |
| PM10 | Compliance Assurance Monitoring for ES-002, ES-004, ES-006, ES-007, and ES-008 – Section 2.3 A. | 15A NCAC 02D .0614 |

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

a. Emissions of particulate matter from these sources **(ID Nos. ES-002, ES-004, ES-006, ES-007, ES-008, and ES-011)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (for process rates greater than 30 tons per hour)

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour
Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring** [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from these sources **(ID Nos. ES-002, ES-004, ES-006, ES-007, ES-008, and ES-011)** shall each be controlled by a cartridge or fabric filter as delineated in SECTION 1. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and material collection units for leaks; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection, where feasible, of each bag/cartridge house for structural integrity and filter fabric condition.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the cartridge and fabric filters are not inspected and maintained.

d. The following continuous parametric measures of bagfilter performance are to be observed and recorded: differential pressure and a dust monitor located in the outlet header. Measured out of range deviations are to be alarmed with corrective actions taken.

e. Parametric instrumentation shall be cleaned and calibrated as recommended by the manufacturer. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the parametric instrumentation is not inspected and maintained.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

f. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on any control device; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the records of the monitoring results are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

g. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.

h. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 A.1.c through f postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

a. Emissions of sulfur dioxide from these sources **(ID Nos. ES-002, ES-004, ES-006, ES-007, ES-008, and ES-011)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining

compliance with this standard.

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in these sources **(ID Nos. ES-002, ES-004, ES-006, ES-007, ES-008, and ES-011)**

**3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

a. Visible emissions from these sources **(ID Nos. ES-002, ES-004, ES-006, ES-007, ES-008, and ES-011)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring** [15A NCAC 02Q .0508(f)]

c. i. To ensure compliance, once a month the Permittee shall observe the emission points of these sources **(ID Nos. ES-002, ES-004, ES-006, ES-007, ES-008, and ES-011)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement.

If visible emissions from this source are observed to be above normal, the Permittee shall either:

(A) take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or

(B) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.3. a. above.

ii. The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if:

(A) the above-normal emissions are not corrected per c.i.(A) above;

(B) the demonstration in c.i.(B) above cannot be made;

(C) the monthly observations are not conducted per c.i above; or

**Recordkeeping** [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format), kept on-site, and made available to an authorized representative upon request. The logbook shall record the following:

i. the date and time of each recorded action;

ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and

iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the records of the monitoring results are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section(s) 2.1 A.3.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**4. ALTERNATIVE OPERATING SCENARIOS** [15A NCAC 02Q .0508(p)]

The Permittee, contemporaneously with making a change from one alternate operating scenario to another, shall record in a logbook (written or electronic format) the scenario under which it is operating. [15A NCAC 02Q .0508(p)]

## B. Miscellaneous Emission Collections System (ID No. ES-003) with scrubber controls and Various Wave Guide Manufacturing Equipment Emissions Collection System (ID No. ES-010) with scrubber controls

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Particulate matter | For process rates up to 30 tons per hour:<br>$E = 4.10 \times P^{0.67}$<br>For process rates greater than 30 tons per hour:<br>$E = 55.0 \times P^{0.11} - 40$<br>Where:<br>E = allowable emission rate in pounds per hour, and<br>P = process weight in tons per hour | 15A NCAC 02D .0515 |
| Visible emissions | 20 percent opacity | 15A NCAC 02D .0521 |
| PM10 | **PSD Avoidance** - facility wide emissions shall not exceed 250 tons per consecutive 12-month period, running monthly total<br>(See Multiple Emissions Sources - Section 2.2 E. 1.) | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |
| Odorous emissions | **State-enforceable only**<br>See Section 2.2 A. 2. | 15A NCAC 02D .1806 |
| Toxic air pollutants | **State-enforceable only-** toxic air pollutant ambient impact must not exceed acceptable ambient concentrations<br>(See Multiple Emissions Sources - Section 2.2 D.1.) | 15A NCAC 02D .1100 |

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

a. Emissions of particulate matter from these sources **(ID Nos. ES-003 and ES-010)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (for process rates greater than 30 tons per hour)

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

**Monitoring, Recordkeeping, and Reporting** [15A NCAC 02Q .0508(f)]

c. No monitoring, recordkeeping or reporting is required.

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

a. Visible emissions from this source **(ID Nos. ES-003 and ES-010)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring** [15A NCAC 02Q .0508(f)]

c. i. To ensure compliance, once a calendar month for miscellaneous emission collections system **(ID No. ES-003)**, and once a month the Permittee shall observe the emission point of this source **(ID No. ES-010)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   (A) take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   (B) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.2. a. above.

ii. The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if:
   (A) the above-normal emissions are not corrected per c.i.(A) above;
   (B) the demonstration in c.i.(B) above cannot be made;
   (C) the monthly observations are not conducted per c.i above; or

**Recordkeeping** [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format), kept on-site, and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the records of the monitoring results are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section(s) 2.1 A.2.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## C. Four CI diesel-fired engines including emergency generators (ID Nos. ES-EPG1, ES-EPG2, ES-EPG3, ES-EPG4 (not constructed)[1], and three fire-pumps (ID Nos. ES-FP1, ES-FP2, and ES-FP3)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Sulfur dioxide | 2.3 pounds per million Btu heat input | 15A NCAC 02D .0516 |
| Visible emissions | 20 percent opacity | 15A NCAC 02D .0521 |
| Hazardous air pollutants | National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines<br><br>For existing engines less than or equal to 500 hp; See 2.1 C.3. below<br>For existing engines more than 500 hp;<br>See 2.1 C. 4. Below | 15A NCAC 02D .1111 (40 CFR 63, Subpart ZZZZ) |
| Multiple emissions | Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE) | 15A NCAC 02D .0524 40 CFR 60, Subpart IIII |
| NOx | **PSD Avoidance** - facility wide emissions shall not exceed 250 tons per consecutive 12-month period, running monthly total<br>(See Multiple Emissions Sources - Section 2.2 B. 1.) | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |
| PM10 | **PSD Avoidance** - facility wide emissions shall not exceed 250 tons per consecutive 12-month period, running monthly total<br>(See Multiple Emissions Sources - Section 2.2 E. 1.) | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |

**1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

a. Emissions of sulfur dioxide from these sources **(ID Nos. ES-EPG1, ES-EPG2, ES-EPG3, ES-EPG4, ES-FP1, ES-FP2, and ES-FP3)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

**Monitoring, Recordkeeping, and Reporting** [15A NCAC 02Q .0508(f)]

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of diesel fuel in these sources **(ID Nos. ES-EPG1, ES-EPG2, ES-EPG3, ES-EPG4, ES-FP1, ES-FP2, and ES-FP3)**.

[1] This proposed unit **ES-EPG4** is permitted but has not been constructed. The Permittee shall contact the Wilmington Regional Office to determine if a permit is required before construction.

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

a. Visible emissions from these sources **(ID Nos. ES-EPG1, ES-EPG2, ES-EPG3, ES-EPG4, ES-FP1, ES-FP2, and ES-FP3)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02D .2601]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring, Recordkeeping, and Reporting** [15A NCAC 02Q .0508(f)]

c. No monitoring, recordkeeping, or reporting is required for the combustion of diesel fuel.

*For emergency generators **ID Nos. ES-EPG1, ES-EPG2, and ES-EPG3):***

**3. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

**Applicability** [40 CFR 63.6585, 63.6590(a)(1)(i)]

a. For these emission source(s) (existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

**Stationary RICE subject to limited requirements** [40 CFR 63.6590(b)]

b. Pursuant to 40 CFR 63.6590(b)(3)(iii), these sources do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and of Subpart A, including initial notification requirements.

*For emergency fire pumps **ID Nos. ES-FP1 and ES-FP2):***

**4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

**Applicability** [40 CFR 63.6585, 63.6590(a)(1)(ii)]

a. For these emission source(s) (existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

**Definitions and Nomenclature**

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.6675 shall apply.

**Applicability Date** [40 CFR 63.6595(a)(1)]

c. The Permittee shall comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013.

**Notifications** [40 CFR 63.6645(a)(5)]

d. The Permittee has no notification requirements.

**General Provisions** [40 CFR 63.6665]

e. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart ZZZZ

**Operating and Maintenance Requirements** [15A NCAC 02Q .0508(b)]

f. During periods of startup of the IC engine, the Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63.6602 and 63.6625(h)]

g. Except during periods of startup of the IC engine, the Permittee shall:
   i. Change oil and filter every 500 hours of operation or annually, whichever comes first;
   ii. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
   iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

   [40 CFR 63.6602, Table 2C]

h. The Permittee shall have the option to utilize the oil analysis program as described in 40 CFR 63.6625(i) in order to extend the specified oil change requirement in **Section 2.1 C.4.g**. [40 CFR 63.6602, Table 2C, 63.6625(i)]

i. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in **Section 2.1 C.4.g.,** or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. [40 CFR 63.6602, Table 2C]

j. The permittee shall be in compliance with the emission limitations, operating limitations and other requirements in this subpart that apply at all times. [40 CFR 63.6605(a)]

k. The Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

l. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e) and 63.6640(a), Table 6]

m. In order for the engine to be considered an emergency stationary RICE under this condition, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) below, is prohibited.

   (1) There is no time limit on the use of emergency stationary RICE in emergency situations.

   (2) The Permittee may operate the emergency stationary RICE for any combination of the purposes specified below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) below counts as part of the 100 hours per calendar year allowed by this paragraph (2).

   Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and

transmission operator, or the insurance company associated with the engine.

The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (m)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
[40 CFR 63.6640(f)]

**Monitoring** [15A NCAC 02Q .0508(f)]

n. The Permittee shall install a non-resettable hour meter on the IC engine if one is not already installed. [40 CFR 63.6625(f)]

**Recordkeeping** [15A NCAC 02Q .0508(f)]

o. The Permittee shall keep the following:
   i. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).[40 CFR 63.6655(a)(1)]
   ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
   iii. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
   iv. Records of actions taken during periods of malfunction to minimize emissions in accordance with **Section 2.1 C.4.k.**, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]
   v. Records of the maintenance conducted on the RICE pursuant to **Section 2.1 C.4.l**. [40 CFR 63.6655(d) and (e)]
   vi. Records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

   [40 CFR 63.6655(f)]

p. The Permittee shall keep each record in a form suitable and readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a), (b), (c)]

**Reporting** [15A NCAC 02Q .0508(f)]

q. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance must be clearly identified. [40 CFR 63.6640(b), (e), and 63.6650(f)]
   i. The summary report shall also include any reporting required under **Section 2.1 C.4.i.**, as necessary. [40 CFR 63.6602, Table 2C]

r. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 C.4.e. through q**. are not met.

*For emergency fire pump **ID Nos. ES-FP3):***

**5. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS**

**Applicability** [15A NCAC 02Q .0508(f), 40 CFR 60.4200(a)(2)(ii)]

a. For this fire pump engine, the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," including Subpart A "General Provisions."

**General Provisions** [15A NCAC 02Q .0508(f)]

b. Pursuant to 40 CFR 60 .4218, The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 8 of 40 CFR 60 Subpart IIII.

**Emission Standards** [15A NCAC 02Q .0508(f)]

c. The Permittee shall comply with the emission standards in Table 4 of NSPS subpart IIII for all pollutants, for the same model year and maximum engine power for this engine. [40CFR 60.4205(c)]

**Fuel Requirements** [15A NCAC 02Q .0508(f)]

d. The Permittee shall use diesel fuel in the engine with:
   i. a maximum sulfur content of 15 ppm; and
   ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 60.4207(b) and 40 CFR 80.510(b)]

**Testing** [15A NCAC 02Q .0508(f)]

e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in **Section 2.1 C.5.c and d** above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

**Monitoring** [15A NCAC 02Q .0508(f)]

f. The engine has the following monitoring requirements:
   i. The engines shall be equipped with a non-resettable hour meter prior to startup. [40CFR 60.4209(a)]
   ii. The engine, if equipped with a diesel particulate filter, must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40CFR 60.4209(b)]

**Compliance Requirements** [15A NCAC 02Q .0508(b)]

g. The Permittee shall:
   i. operate and maintain the engines and control devices according to the manufacturer's emission related-written instructions over the entire life of the engine;
   ii. change only those emission-related settings that are permitted by the manufacturer; and
   iii. meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable. [40CFR 60.4206 and 60.4211(a)]

h. The Permittee shall comply with the emission standards in condition c. by purchasing an engine certified to the emission standards in **Section 2.1 C.5.c**. The engine shall be installed and configured according to the manufacturer's specifications. [40CFR 60.4211(c)]

i. In order for the engine to be considered an emergency stationary ICE under this condition, any operation other than emergency operation, maintenance and testing, and operation in non- emergency situations for 50 hours per year, as described below, is prohibited.
   (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
   (2) The Permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraph (i(2)(i) of this condition for a maximum of 100 hours per calendar year.

Any operation for non-emergency situations as allowed by paragraph (i)(3) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (i)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (i)(2) of this condition. Except as provided in paragraph (i)(3)(i) of this condition, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[40CFR 60.4211(f)]

j. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in **Sections 2.1 C.5.f through i** are not met.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

k. To assure compliance, the Permittee shall perform inspections and maintenance on the engine as recommended by the manufacturer per 40 CFR 60.4206 and 40 CFR 60.4211(a). The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

i. the date and time of each recorded action;
ii. the results of each inspection;
iii. the results of any maintenance performed on the engine;
iv. any variance from manufacturer's recommendations, if any, and corrections made;
v. the hours of operation of the engine in emergency and non-emergency service. [40 CFR 60.4214(b)]
vi. if a PM filter is used, records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached [40 CFR60.4214(c)]; and
vii. documentation from the manufacturer that the engine is certified to meet the emission standards in **Section 2.1. C.5.c**.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

l. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance with the requirements of this permit shall be clearly identified.

m. If the Permittee owns or operates an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in **Section 2.1 C.5.i.(3)(i)**, the Permittee shall submit an annual report according to the requirements at 40 CFR 60.4214(d). This report must be submitted to the Regional Supervisor and the EPA. [40 CFR60.4214(d)]

*For emergency fire pump **ID Nos. ES-FP3):***

**6. 15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

**Applicability** [40 CFR 63.6585, 6590(a)(2)(ii)]

a. For these engines (stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions) the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ, "National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

**Stationary RICE subject to Regulations under 40 CFR Part 60** [15 A NCAC 2Q. 0508(f)]

b. Pursuant to 40 CFR 63.6590(c)(6), this source must meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR part 60 subpart IIII. No further requirements apply for these engines under 40 CFR 63 Subpart ZZZZ and Subpart A.

If the requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

## D. Glass modification, Glass Drying, and Tramp Fume Collection System (ID No. ES-001) with scrubber controls, Glass Drying, and Tramp Fume Emissions Collection System (ID No. ES-005) with scrubber controls, and Glass Drying Process (ID No. ES-009) with scrubber controls

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| PM10 | **PSD Avoidance** - facility wide emissions shall not exceed 250 tons per consecutive 12-month period, running monthly total (See Multiple Emissions Sources - Section 2.2 E. 1.) | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |
| Odorous emissions | **State-enforceable only** See Section 2.2 A. 2. | 15A NCAC 02D .1806 |
| Toxic air pollutants | **State-enforceable only-** toxic air pollutant ambient impact must not exceed acceptable ambient concentrations (See Multiple Emissions Sources - Section 2.2 D.1.) | 15A NCAC 02D .1100 |

## E. Acrylate Coating and Curing Operations for Optical Fiber (ID No. ES-COATING)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Odorous emissions | **State-enforceable only**<br>See Section 2.2 A. 2. | 15A NCAC 02D .1806 |
| Toxic air pollutants | **State-enforceable only**- facility wide emissions shall not exceed toxic pollutant exemption rates<br>(See Multiple Emissions Sources - Section 2.2 C. 1.) | 15A NCAC 02D .0711 |

## F. Natural Gas-Fired Humidification Boilers (2.9 million Btu per hour) (ID Nos. ES-HB)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Particulate matter | 0.60 pounds per million Btu | 15A NCAC 02D .0503 |
| Sulfur dioxide | 2.3 pounds per million Btu | 15A NCAC 02D .0516 |
| Opacity | 20 percent opacity | 15A NCAC 02D .0521 |
| PM10 | **PSD Avoidance** - facility wide emissions shall not exceed 250 tons per consecutive 12-month period, running monthly total<br>(See Multiple Emissions Sources - Section 2.2 E. 1.) | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |
| HAPs | Best Combustion Practices | 15A NCAC 02D .1109 *[CAA § 112(j)]* |
| HAPs | Maximum Achievement Control Technology | 40 CFR 63, Subpart DDDDD |

**1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS**

a. Emissions of particulate matter from the combustion of natural gas that are discharged from the affected boilers **(ID Nos. ES-HB)** into the atmosphere shall not exceed 0.60 pounds per million Btu heat input.

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limits given in Section 2.1 F.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in these sources.

**2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

a. Emissions of sulfur dioxide from this source **(ID Nos. ES-HB)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for natural gas from the firing of natural gas in this source **(ID Nos. ES-HB)**.

**3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

a. Visible emissions from this source **(ID Nos. ES-HB)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

**Testing** [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in this source.

**4. 15A NCAC 02D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters**

a. The Permittee shall use best combustion practices when operating the affected boiler **(ID Nos. ES-HB)**. The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **December 4, 2012**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

**Monitoring/Recordkeeping**

b. To ensure compliance, the Permittee shall perform an annual boiler inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
   i. Inspect the burner, and clean or replace any components of the burner as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
   iii. Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly.

   The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected boilers are not inspected and maintained as required above.

c. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date of each recorded action;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

**Reporting** [15A NCAC 02Q .0508(f)]

d. No reporting is required for hazardous air pollutants from the firing of natural gas in these sources.

**5. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

**Applicability** [40 CFR 63.7485, §63.7490(d), §63.7499(l)]

a. For the existing source designed to burn gas 1 fuels with a heat input capacity of less than or equal to 5 million Btu per hour, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."
   i. The Permittee shall comply with the CAA §112(j) standard in Section 2.1 F.4 through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

**Definitions and Nomenclature** [§63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

**40 CFR Part 63 Subpart A General Provisions** [§63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

**Compliance Date** [§63.7510(e), §63.56(b)]

d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019.

**Notifications** [§63.7545(e),§63.7530(e)]

e. The Permittee shall submit a Notification of Compliance Status. The notification must be signed by a responsible official and submitted by July 19, 2019. The notification shall contain the following:
   i. A description of the affected unit including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel burned.
   ii. the following certification(s) of compliance, as applicable:
      (A)- "This facility completed the required initial tune-up for the boiler covered by 40 CFR 63 Subpart DDDDD at the site according to the procedures in.§63.7540(a)(10)(i) through (vi)' [i.e., Sections 2.1 F.5.f.i and h.ii]; and
      (B)- "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)" [i.e., Section 2.1 F.5.g] and is an accurate depiction of the facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

**Work Practice Standards** [15A NCAC 02Q .0508(f)]

f. i. The Permittee shall conduct a tune-up of the boiler every five years as specified below:
      (A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months.
      (B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
      (C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown).
      (D) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any $NO_X$ requirement to which the unit is subject.
      (E) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be

either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
[§63.7500(a), (e), §63.7540(a)(10), (a)(12)]

ii. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. [§63.7515(d)]

iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13), §63.7515(g)]

iv. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.[§63.7500(a)(3)]

v. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section **2.1 F.5.f** are not met.

**Energy Assessment Requirements** [15A NCAC 02Q .0508(f)]

g. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart DDDDD, Table 3, with the extent of the evaluation for items (a) to (e) in Table 3 appropriate for the on-site technical hours listed in 40 CFR 63.7575: [§63.7500(a)(1), Table 3] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

**Recordkeeping Requirements** [15A NCAC 02Q .0508(f), §63.7555]

h. The Permittee shall keep the following:

i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or 5-year compliance report that has been submitted, according to the requirements in §63.10(b)(2)(xiv). [§63.7555(a)(1)]

ii. Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:

(A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after tune-up of the boiler;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[§63.7540(a)(10)(vi)]

iii. The associated records for Sections 2.1 F.5.f through g.

i. The Permittee shall:

i. maintain records in a form suitable and readily available for expeditious review;

ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and

iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

[§63.7560, §63.10(b)(1)]

j. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in Sections 2.1 F.5.h through i.

**Reporting Requirements** [15A NCAC 02Q .0508(f)]

k. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first report shall cover the period beginning on May 20, 2019 and ending on December 31, 2023 . Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the

compliance reports postmarked on or before January 30 for the preceding reporting period.[§63.7550(a), (b)]

i. The compliance report must also be submitted electronically via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [§63.7550(h)(3)]

l. The compliance report must contain the following information:
   i. Company name and address;
   ii. Process unit information, emissions limitations, and operating parameter limitations;
   iii. Date of report and beginning and ending dates of the reporting period;
   iv. Include the date of the most recent tune-up for each unit required according to Section 2.1 F.5.f. Include the date of the most recent burner inspection if it was not done on a 5-year basis and was delayed until the next scheduled or unscheduled unit shutdown.
   v. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

   [§63.7550(a) and (c), Table 9]

m. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in **Section 2.1 F.5.k through l** are not met.

# 2.2 - Multiple Emission Source(s) Specific Limitations and Conditions

## A. Facility Wide

The following table provides a summary of limits and standards for the emission source(s) describe above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Odor | odor control | 15A NCAC 02D .1806 |

**State Enforceable Only**

**1. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

## B. Facility Wide Including:
## Five Chemical Vapor Deposition Processes (ID Nos. ES-002, ES-004, ES-006, ES-007, and ES-008);
## Glass Modification Equipment (ID No. ES-011); and
## Diesel-fired Internal Combustion Engines

The following table provides a summary of limits and standards for the emission source(s) describe above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| NOx | Facility wide emissions of nitrogen oxides shall not exceed 250 tons per consecutive 12-month period on a rolling total basis | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |

**1. 15A NCAC 02Q .0317: AVOIDANCE CONDITION for**
**15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

a. To comply with this permit and avoid the applicability of 15A NCAC 02D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, nitrogen oxides emissions from the facility shall be less than 250 tons per consecutive 12-month period on a rolling monthly total basis.

b. Operations Restrictions - To ensure emissions do not exceed the limitations above, NOx emissions shall be calculated as follows:
   i. NOx emissions from the processes **ES-002** and **ES-008** shall be the Btu heat input to the process times 1.065 tons of nitrogen oxide per billion Btu (except for the TAS lathe at **ES-002** whose emission factor is 1.82 tons of nitrogen oxide per billion Btu),
   ii. NOx emissions from process **ES-006** shall be the Btu heat input times 1.494 tons of nitrogen oxide per billion Btu,
   iii. NOx emissions from the processes **ES-004** and **ES-007** shall be the heat input to the process times 1.95 tons of nitrogen oxide per billion Btu, and
   iv. NOx emission from the diesel-fired engines shall be determined using the actual heat input times the current AP-42 emissions factor, documented manufacturer's emission factors.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the nitrogen oxide emissions logbook is not maintained or if the nitrogen oxide emissions exceed the limit in Section 2.2-

B.1.a. above.

**Testing** [15A NCAC 02Q .0508 (f)]

c. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ.
   i. Periodic testing of the above sources **(ID Nos. ES-004 and ES-007)** shall be conducted once every 5 years. If the results of this test are above the limits given in Sections 2.2 B.1.a. above for NOx emission rates, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
   ii. Operating parameters or emission factors as specified in this permit do not apply during performance tests or emissions tests conducted in an attempt to establish new operating parameters or emission factors.

   The source shall be responsible for ensuring, within the limits of practicality, that the equipment or process being tested is operated at or near its maximum normal production rate, or at a lesser rate if specified by the Director or his delegate. The results of any testing pursuant to this paragraph shall be submitted to DAQ within 30 days of receipt by the Permittee.

d. Recordkeeping Requirements - The Permittee shall keep each monthly record on file for a minimum of three years. The report shall contain the following:
   i. the date meter read, the meter reading, and the calculated quantity by fuel type delivered to processes **ES-002**, **ES-004**, **ES-006**, **ES-007**, **ES-008**, and **ES-011**. In addition, the silicon fluid delivered to these processes shall be measured monthly by load cells or on a per drum basis,
   ii. a detailed list of the lathes which comprise processes **ES-002**, **ES-004**, **ES-006**, **ES-007**, and **ES-008** from which nitrogen oxide is emitted,
   iii. monthly calculation of heat input to processes **ES-002**, **ES-004**, **ES-006**, **ES-007**, **ES-008**, **ES-011**, and the **diesel engines**, and
   iv. the dates of meter calibration by identification number and a brief summary of any required meter calibrations.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not maintained.

e. Reporting Requirements - The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. the monthly nitrogen oxide emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months,
   ii. the monthly Btu heat input for processes **ES-002**, **ES-004**, **ES-006**, **ES-007**, **ES-008**, and **ES-011** including the heat input value of the silicon fluid for the previous 17 months, and
   iii. The monthly heat input to the diesel engines for the previous the previous 17 months.
   iii. All instances of deviations from the requirements of this permit must be clearly identified.

## C. Facility Wide Including: Acrylate Coating and Curing for Glass Optical Fiber (ID No. ES-COATING)

The following table provides a summary of limits and standards for the emission source(s) describe above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Toxic air pollutants | facility wide emissions of toxic air pollutants shall not exceed the applicable toxic pollutant exemption rate (TPER) | 15A NCAC 02Q .0711 |

**State Enforceable Only**

**1. 15A NCAC 02Q .0711: TOXIC AIR POLLUTANT EMISSIONS REQUIRING A PERMIT**

Pursuant to 15A NCAC 02Q .0711 Emission Rates Requiring a Permit, for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that facility-wide actual emissions do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 02Q .0711. The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 02Q .0711.

a. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.

b. PRIOR to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 02D .1100 "Control of Toxic Air Pollutants".

c. In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

| | TPERs Limitations | | | |
|---|---|---|---|---|
| **Pollutant (CAS Number)** | **Carcinogens (lb/yr)** | **Chronic Toxicants (lb/day)** | **Acute Systemic Toxicants (lb/hr)** | **Acute Irritants (lb/hr)** |
| Methyl Ethyl Ketone (78-93-3) | | 78 | | 22.4 |
| Toluene (108-88-33) | | 98 | | 14.4 |
| Xylene (1330-20-7) | | 57 | | 16.4 |

## D. Glass Modification, Glass Drying, and Tramp Fume Emissions Collection System (ID No. ES-001) with scrubber controls, Two Chemical Vapor Deposition Processes (ID Nos. ES-002 and ES-008) with fabric filter and scrubber controls, Miscellaneous Emission Collections System (ID No. ES-003), with scrubber controls, Glass Drying and Tramp Fume Collection System (ID No. ES-005) with scrubber controls, Chemical Vapor Deposition Processes (ID No. ES-006) with fabric filter controls, Glass Drying Process (ID No. ES-009) with scrubber controls, Various Wave Guide Manufacturing Equipment Emissions Collection System (ID No. ES-010) with scrubber controls, and Glass Modification Process (ID No. ES-011) with oxidizer, fabric filter, and scrubber controls.

The following table provides a summary of limits and standards for the emission source(s) describe above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Toxic air pollutants | toxic air pollutants shall not exceed the applicable emissions rate to ensure that the acceptable ambient air quality levels (AAL) are not exceeded | 15A NCAC 02D .1100 |

**State Enforceable Only**

**1. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS**

Pursuant to 15A NCAC 02D .1100 "Control of Toxic Air Pollutants," and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

| Emission Point | Toxic Air Pollutant | Emission Limits |
|---|---|---|
| **Stack 2A** | **Hydrogen Chloride *** | 12.12 lb/hr |
| | **Chlorine *** | 15.57 lbs/hr and 373.68 lb/day |
| | **Total Fluorides (including HF)** | 2.82 lb/hr and 67.68 lb/day |
| | **Hydrogen Fluoride** | 2.97 lb/hr and 71.28 lb/day |
| **Stack 3** | **Hydrogen Chloride *** | 128.75 lb/hr |
| | **Chlorine *** | 65.53 lb/hr and 1572.72 lb/day |
| | **Total Fluorides (including HF)** | 2.50 lb/hr and 47.08 lb/day |
| | **Hydrogen Fluoride** | 1.90 lb/hr and 31.99 lb/day |
| **Stack 5** | **Hydrogen Chloride *** | 0.79 lb/hr |
| | **Chlorine *** | 3.51 lb/hr and 38.47 lb/day |
| **Stack 6** | **Total Fluorides (including HF)** | 4.96 lb/hr and 119.04 lb/day |
| | **Hydrogen Fluoride** | 3.02 lb/hr and 7 2.48 lb/day |

* Hydrogen chloride and chlorine emissions shall be monitored as specified in Section 2.2 D. 1. b. i.

**a. Emissions Control Requirements**

i. WET SCRUBBER SYSTEM REQUIREMENTS - Hydrogen chloride and chlorine toxic air pollutant emissions shall be controlled as described in the permitted equipment list.

(A) Wet Scrubber Systems Inspection and Maintenance Requirements

To comply with the provisions of this Permit and ensure that optimum control efficiency is maintained, the Permittee shall establish an inspection and maintenance schedule/checklist based on manufacturer's recommendations. Additionally, an annual internal inspection shall be conducted on the wet scrubbers by the Permittee to insure structural integrity such that optimum control efficiency is achieved. As a minimum, the inspection and maintenance program will include inspection of spray nozzles, packing material, chemical feed system (if so equipped), and the cleaning/calibration of all associated instrumentation.

(B) Wet Scrubber Systems Monitoring Requirements

The Permittee shall ensure the proper performance of each scrubber by monitoring the following operational parameters where appropriate:

(1) recycle liquid flow rates,
(2) sump levels,
(3) pH of recirculation tank scrubbing solution, and
(4) pressure drop across each scrubber.

(C) Wet Scrubber Systems Record Keeping and Reporting Requirements

A scrubber logbook or equivalent shall be kept on site and made available to DAQ personnel

upon request. Any variance from manufacturer's recommendations shall be investigated with corrections made and date of actions recorded in the logbook.
Inspections and maintenance of the I & M program, the recycle liquid flow rates, sump levels, pH of the scrubber solutions, and the pressure drop across the scrubbers shall be recorded in a log book, or equivalent. No reporting is required.

ii. THERMAL OXIDIZER REQUIREMENTS - Fluoride compound emissions from the glass modification process (ID No. ES-011) shall undergo degradation by thermal oxidizers (ID Nos. CD-OX1 through CD-OX6).
(A) Inspection and Maintenance Requirements - To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform periodic inspection and maintenance (I&M) as recommended by the manufacturer. As a minimum, the Permittee shall perform an annual internal inspection of the combustion head to ensure structural integrity.
(B) Recordkeeping Requirements - The results of all inspections and any variance from manufacturer's recommendations or from those given in this permit (when applicable) shall be investigated with corrections made and dates of actions recorded in a logbook. Records of all maintenance and monitoring activities shall be recorded in the logbook. The logbook (in written or electronic form) shall be kept on-site and made available to DAQ personnel upon request.
(C) Monitoring Requirements - The Permittee shall ensure the proper performance of the thermal oxidizer by monitoring the following operational parameters:
(1) the Permittee shall continuously measure the temperature at the combustion chamber (design range of **1,200 F to 2,100 F**), and
(2) the Permittee shall continuously measure the flow rate to the oxidizer (**13.70 to 24.33 scfm** per oxidizer unit on-line).

iii. ADSORBER SYSTEM REQUIREMENTS - Hydrogen fluoride emissions from the glass modification process (ID No. ES-011) shall be controlled by a vertical moving bed limestone adsorber ID No. CD-HFS-1).
(A) Adsorber System Inspection and Maintenance Requirements
To comply with the provisions of this Permit and ensure that optimum control efficiency is maintained, the Permittee shall establish an inspection and maintenance schedule/checklist based on manufacturer's recommendations. Additionally, an annual inspection shall be conducted on the adsorber by the Permittee to insure structural integrity such that optimum control efficiency is achieved.

(B) Adsorber System Monitoring Requirements
The Permittee shall ensure the proper performance of each scrubber by monitoring the following operational parameters where appropriate:
(1) pressure drop across the adsorber and
(2) verification of limestone bed movement through the adsorber by way of feed hopper replenishment.
(C) Adsorber System Record Keeping and Reporting Requirements
A scrubber logbook or equivalent shall be kept on site and made available to DAQ personnel upon request. Any variance from manufacturer's recommendations shall be investigated with corrections made and date of actions recorded in the logbook.
The I & M program, feed hopper replenishment for the limestone adsorber, and the pressure drop across the adsorber shall be recorded. The results of inspections and any maintenance performed on the adsorber shall be recorded in a log book, or equivalent. No reporting is required.

**b. Emission Monitoring and Recordkeeping Requirements**
i. Hydrogen chloride and chlorine emissions shall be monitored as follows.
(A) A physical audit of all production equipment set-ups, covered under Sources ES-002, ES-005, ES-008, ES-009, and ES-010 shall be conducted where applicable on a quarterly basis to certify that the mass flow controllers are the correct size and at correct setting. In addition, a

quarterly sample audit of recipes shall be made where applicable to help ensure that the potential does not exist for the permit limits to be exceeded based on material balance.

(B) The Permittee shall maintain records of production rates, throughput, material usage, and other process operational information as is necessary to determine compliance with the above toxic air pollutant emission limits at sources ES-001, ES-002, ES-003 ES-005, ES-008, ES-009, and ES-010.

ii. All records required by these permit stipulations shall be kept on site and made available to the DAQ upon request. The Permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in this permit for a minimum of two years from the date of recording.

For compliance purposes, within 30 days after each calendar year quarter, the Permittee shall provide to the Regional Supervisor a certification that the monitoring described above was performed and include a summary of the results.

## E. Facility Wide Including:

**Five Chemical Vapor Deposition Processes (ID Nos. ES-002, ES-004, ES-006, ES-007, and ES-008); Miscellaneous Emissions Collection System (ID Nos. ES-003); Glass Drying and Tramp Fume Collection System (ID Nos. ES-005); Various Waveguide Manufacturing Equipment (ID Nos. ES-010); Glass Modification Equipment (ID No. ES-011); Emergency Bulk SiCl4 System (ID Nos. IES-EBSV); Humidification Boilers (ID Nos. ES-HB); Soot Silos (ID Nos. IES-SHP1, IES-SHP2); Soot Vacuum Systems (ID Nos. IES-SOOTVACS) and Diesel-fired Internal Combustion Engines**

The following table provides a summary of limits and standards for the emission source(s) describe above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| PM-10 | facility wide emissions of PM-10 shall not exceed 250 tons per consecutive 12-month period on a rolling total basis | 15A NCAC 02Q .0317 (Avoidance Condition for 15A NCAC 02D .0530) |

**1. 15A NCAC 02Q .0317: AVOIDANCE CONDITION for**
**15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

To comply with this permit and avoid the applicability of 15A NCAC 02D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, PM-10 emissions from the facility shall be less than 250 tons per consecutive 12-month period, calculated once per year.

a. Operations Restrictions - To ensure emissions do not exceed the limitations above, PM-10 emissions shall be calculated as follows:

i. PM-10 emissions from the processes **ES-002, ES-004, ES-006, ES-007** and **ES-008** shall be based upon raw material usage rates, stoichiometric conversions and stated fabric filter efficiencies,

ii. PM-10 emissions from process **ES-003, ES-005, ES-010, ES-011** shall be based upon raw material usage rates and stoichiometric conversions,

iii. PM-10 emissions from the emergency bulk SiCl4 system, humidification boilers, soot silos, soot vacuums and diesel-fired engines shall be the permitted potential to emit from these sources.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the PM-10 emissions logbook is not maintained or if the PM-10 emissions exceed the limit in Section 2.2 B.1. above.

b. Recordkeeping Requirements - The Permittee shall keep an annual record on file for a minimum of three years. The report shall contain the following:

i. annual raw material usage rates for processes **ES-002**, **ES-004**, **ES-006**, **ES-007**, **ES-008**, **ES-003, ES-005, ES-010** and **ES-011**.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not maintained.

c. Reporting Requirements - The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. the monthly PM-10 emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months,
   ii. all instances of deviations from the requirements of this permit must be clearly identified.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the PM-10 emissions logbook is not maintained or if the PM-10 emissions exceed the limit in Section 2.2 E.1. above.

# 2.3 – Compliance Assurance Monitoring (40 CFR 64)

## A. Three parallel fabric filters (ID Nos. CD-BH-1, CD-BH-2, and CD-BH-3)
## Fabric filter (ID No. CD-BH-4)
## Fabric filter (ID No. CD-BH-5)
## Fabric filter (ID No. CD-BH-6)
## Fabric filter (ID No. CD-BH-9)

### 1. 15A NCAC 02D .0614: Continuous Assurance Monitoring (40 CFR 64)

The Permittee shall ensure that PM10 emission from the following sources shall be controlled as follows:
i) the natural gas-fired chemical vapor deposition process (ID No. ES-002) is controlled by the three parallel fabric filters (ID Nos. CD-BH-1, CD-BH-2, and CD-BH-3),
ii) the natural gas-fired chemical vapor deposition process (ID No. ES-006) is controlled by the fabric filter (ID No. CD-BH-4),
iii) The natural gas fired vapor deposition process (ID No. ES-007) is controlled by the fabric filter (ID No. CD-BH-5),
iv) the natural gas-fired chemical vapor deposition process (ID No. ES-008) is controlled by the fabric filter (ID No. CD-BH-6), and
v) the natural gas-fired chemical vapor deposition process (ID No. ES-004) is controlled by the fabric filter (ID No. CD-BH-9)

The Permittee shall monitor the pressure differential across each bagfilter. The sources, control devices, pollutant controlled, regulation, maximum and minimum pressure difference across each bagfilter are outlined in the table below:

| Source | Control device(s) | Pollutant controlled | Regulation | Maximum pressure difference across the bagfilter in inches of water | Minimum pressure difference across the bagfilter in inches of water |
|---|---|---|---|---|---|
| ES-002 | CD-BH-1, CD-BH-2, and CD-BH-3 | PM10 | 02D .0515 | 14.5 | 0.1 |
| ES-006 | CD-BH-4 | PM10 | 02D .0515 | 14.5 | 0.075 |
| ES-006 AOS | CD-BH-4 | PM10 | 02D .0515 | 16.5 | 0.10 |
| ES-007 | CD-BH-5 | PM10 | 02D .0515 | 14.0 | 0.2 |
| ES-008 | CD-BH-6 | PM10 | 02D .0515 | 16.5 | 0.2 |
| ES-004 | CD-BH-9 | PM10 | 02D .0515 | 16.5 | 0.2 |

**Testing**

a. None.

b. **Monitoring Approach.** The key elements of the monitoring approach are presented in the following table.

| | |
|---|---|
| **Indicator** [64.6(c)(1)(i)] | The pressure difference across each bagfilter recorded once per hour during operation. |
| **Measurement Approach** [64.6(c)(1)(ii)] | Pressure measurements are indicated by pressure transmitters on both the inlet and outlet side of each baghouse. |
| **Indicator Range and excursion** [64.6(c)(2)] | An excursion is defined as maximum pressure drop across each bagfilter above the maximum pressure drop for the bagfilter as per the table above or minimum pressure drop across the bagfilter below the minimum pressure drop for the bagfilter as per the table above |
| **Quality Improvement Plan (QIP) Threshold** [64.8] | Four excursions, as defined above, within any 6-month period. |
| **QA/QC Practices and Criteria** [64.3(b)(3)] | The monitoring devices shall be calibrated once per year |
| **Monitoring Frequency** [64.3(b)(4)] | Daily |
| **Data Collection Procedure** | The daily results shall be recorded once every hour per day and kept in a logbook |
| **Averaging Period** | NA |

**Recordkeeping and Reporting**

c. The Permittee must maintain the following records on a monthly basis in accordance with the requirements of 40 CFR 64.9:
   i. records specified in 40 CFR 64 of all measurements of operating parameters including:
      (a) Excursion reports and corrective actions.

d. Semi annual compliance reports must cover the semiannual reporting period from January 1 through June 30 and the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked or delivered no later than July 30 or January 30, whichever date is the first date following the end of the semiannual reporting period. The compliance report must contain the following information:
   i. Company name and address,
   ii. a statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report,
   iii. the date of report and beginning and ending dates of the reporting period,

   iv. a statement that there were no excursion outside of the allowable operating parameter limits during the reporting period (as applicable). Or for each exceedance of an allowable operating parameter that occurs, the compliance report must contain:
      (a) the total operating time of the source during the reporting period,
      (b) information on the number, duration, and cause of exceedances (including unknown cause), if applicable, and the corrective action taken.

## 2.4 - Other Applicable Requirements

**A. 15A NCAC 02Q .0508(g): PREVENTION OF ACCIDENTAL RELEASES - SECTION 112 (r) OF THE CLEAN AIR ACT**

1. The Permittee is subject to Section 112(r) of the Clean Air Act and shall comply with all applicable requirements in accordance with 40 CFR Part 68 [15A NCAC 02Q .0508(g)].

**Recordkeeping/** [15A NCAC 02Q .0508(g)]

2. The Permittee shall submit a Risk Management Plan to EPA pursuant to 40 CFR 68.150 prior to June 21, 1999, or as specified in 40 CFR 68.10.

# SECTION 3 - GENERAL CONDITIONS (version 5.3, 08/21/2018)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements

constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY
The facility shall be properly operated and maintained at all times in a manner that will affect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**
1. Administrative Permit Amendments [15A NCAC 02Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**
1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application;
   b. changes that modify equipment or processes; or
   c. changes in the quantity or quality of materials processed.

   If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
   a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
   b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
      i. the changes are not a modification under Title I of the Federal Clean Air Act;
      ii. the changes do not cause the allowable emissions under the permit to be exceeded;
      iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
      iv. the Permittee shall attach the notice to the relevant permit.
   c. The written notification shall include:
      i. a description of the change;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.
   d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.

3. Off Permit Changes [15A NCAC 02Q .0523(b)]
   The Permittee may make changes in the operation or emissions without revising the permit if:
   a. the change affects only insignificant activities and the activities remain insignificant after the change; or
   b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
   To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A **Reporting Requirements for Excess Emissions and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. *(Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.)*

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
   a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
      i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
         - name and location of the facility;
         - nature and cause of the malfunction or breakdown;
         - time when the malfunction or breakdown is first observed;
         - expected duration; and
         - estimated rate of emissions;
      ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
      iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
   a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B **Other Requirements under 15A NCAC 02D .0535**

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess

emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).

2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. **Emergency Provisions** [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes

applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]
The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]
A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
    a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
    b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
    c. the applicable requirements under Title IV; or
    d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]
The Director may terminate, modify, or revoke and reissue this permit if:
1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]
This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]
1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
   a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
   b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
   c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
   d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

   Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]
The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q. 0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]
A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History [**15A NCAC 02Q .0507(d)(4)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(e)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) –** FEDERALLY-ENFORCEABLE ONLY
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]
This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]
Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]
The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]
In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 02D. If emissions testing is required by this permit or

the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
    a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
        i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
        ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
        iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. **Reopening for Cause** [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
    a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
    b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
    c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
    d. the Director or EPA determines that the permit must be revised or revoked to ensure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 02Q .0508(i)(16)]
The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. **Fugitive Dust Control Requirement** [15A NCAC 02D .0540]
As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 02Q .0501 and .0523]
1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
    a. a description of the change at the facility;
    b. the date on which the change will occur;
    c. any change in emissions; and
    d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]
For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

**List of Acronyms**

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| **AOS** | Alternative Operating Scenario |
| **BACT** | Best Available Control Technology |
| **Btu** | British thermal unit |
| **CAA** | Clean Air Act |
| **CAIR** | Clean Air Interstate Rule |
| **CEM** | Continuous Emission Monitor |
| **CFR** | Code of Federal Regulations |
| **DAQ** | Division of Air Quality |
| **DEQ** | Department of Environmental Quality |
| **EMC** | Environmental Management Commission |
| **EPA** | Environmental Protection Agency |
| **FR** | Federal Register |
| **GACT** | Generally Available Control Technology |
| **HAP** | Hazardous Air Pollutant |
| **MACT** | Maximum Achievable Control Technology |
| **NAA** | Non-Attainment Area |
| **NCAC** | North Carolina Administrative Code |
| **NCGS** | North Carolina General Statutes |
| **NESHAP** | National Emission Standards for Hazardous Air Pollutants |
| **$NO_X$** | Nitrogen Oxides |
| **NSPS** | New Source Performance Standard |
| **OAH** | Office of Administrative Hearings |
| **PM** | Particulate Matter |
| **$PM_{10}$** | Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less |
| **POS** | Primary Operating Scenario |
| **PSD** | Prevention of Significant Deterioration |
| **RACT** | Reasonably Available Control Technology |
| **SIC** | Standard Industrial Classification |
| **SIP** | State Implementation Plan |
| **$SO_2$** | Sulfur Dioxide |
| **tpy** | Tons Per Year |
| **VOC** | Volatile Organic Compound |